REMARKS

The Office Action mailed December 31, 2003 has been carefully considered. Reconsideration of this application, in view of the following remarks, is respectfully requested.

The Specification

The specification has been amended to conform a paragraph in the Summary section to changes made to the claims, and to appropriately complete the reference to the trademarked product referred to in the specification.

The Claims

Prior to entry of this amendment, claims 1 – 24 were pending in this application, including independent claims 1, 12 and 24. Claims 4, 5, 11, 16, 17, 22 and 24 have been canceled.

Claims 1 and 12 have been amended to change the reference to the type of medium cited therein from "storage" to "marking," to more precisely define the covert nature of the first marks, and to rephrase the use of the second marks in decoding. Support for the change from "storage" to marking" is included below in the discussion of the rejection under 35 U.S.C. § 112. Support for language related to the covert nature of the first marks is found in the specification at, *inter alia*, pages 10 – 11.

Claims 25 – 31 have been added, including independent claim 31. Support for claims 25 and 28 may be found, *inter alia*, at page 6, lines 1 – 6. Support for claims 26 and 29 may be found, *inter alia*, at page 9, lines 17 – 23. Support for claims 27 and 30 may be found, *inter alia*, at page 7, line 1. Support for new independent method claim 31 may be found in the description at pages 8 and 9.

Objection to th Specification

In the Office Action, the specification was objected to because of an incomplete reference to the trademarked name of a Xerox Corporation product.

The term "SDK" is an acronym for the generic software industry term "Software Developer's Kit" or "Software Developers Kit." The specification has been amended to more completely identify the product referred to as "Xerox DataGlyph™ Software Developer's Kit." Per MPEP 608.01(v), the trademarked name may be identified in either capital letters or by the appropriate symbol.

Attached to this Reply is a document, labeled as Exhibit I, currently available on the Xerox Corporation web site in Portable Document Format (PDF) entitled "DataGlyphs - Working Document Lifecycle™ Detail" that illustrates an example of a proper reference to the product referred to in the specification. This document is provided solely to illustrate the name of the trademark product in response to the objection in the Office Action, and is not intended in any way to limit the interpretation of any terms used in the claims.

It is believed that this correction appropriately and fully addresses the objection to the specification raised in the Office Action.

35 USC § 112

The Office Action, in paragraph 3, rejected the claims as being indefinite for using the term "storage medium."

The term "storage" in claims 1, 12, and 24 has been replaced with the term "marking." The use of this term does not introduce new matter since the data placed on the media are referred to as "marks" in the claims and throughout the specification, and, further, the term "marking" is referred to in the specification in several places, See, for example, the reference to "other marked patterns" at page 13, lines 15 – 16; the reference to "the overt and covert characteristics are

provided as part of the same marking process" at page 11, line 22 - 23; and the reference to "two marking materials" at page 11. line 20.

It is believed that this change appropriately addresses the rejection to the claims raised in the Office Action. In view of the corrections to the claims and the above remarks, Applicants respectfully request that the rejection to the claims under 35 U.S.C. § 112 be withdrawn.

35 USC § 102

In the Office Action, claims 1 – 24 were rejected, in paragraph 7, under 35 U.S.C. § 102 as being anticipated by US 6,457,651 to Paul et al, hereafter Paul. Note that the Office Action states that claims 1 – 10 and 12 – 24 have been rejected under 35 U.S.C. § 102, but also presents an argument under 35 U.S.C. § 102 against the patentability of claim 11 in paragraph 19. This Reply therefore assumes that claim 11 has also been rejected under 35 U.S.C. § 102. In view of the claims canceled in this amendment, the discussion that follows pertains to amended independent claims 1 and 12 and new independent claim 31.

Establishing a *prima facie* case of anticipation under Section 102 requires that a single reference teach (i.e., identically describe) each and every element of the rejected claim. That is, Section 102 anticipation requires that *all* of the elements and limitations of the claim be found within a *single* prior art reference. The identical invention must be shown in as complete detail as is contained in the claim. The elements must be arranged as required by the claim, but identity of terminology is not required. MPEP §2131 (citations omitted). It follows that the Office Action must explicitly show or it must be obvious where each and every claim element is taught in the reference to meet the burden of establishing the *prima facie* case so that the applicant may have an opportunity to respond.

Amended claims 1 and 12 require that the second marks on said medium convey an overtly marked code; said overtly marked code, when decoded, producing data for use in decoding said covertly marked code.

The Office Action states, in paragraph 9, that the Paul reference discloses the second marks as being drawn to the bar code, and they are useful in decoding the covertly masked code by providing an area in which the glyphs could be printed. However, there appears to be no disclosure in Paul directed to the second marks, when decoded, producing data for use in decoding said covertly marked code. There is, in fact, very little discussion in Paul about the content of the messages encoded by either the bar code or by the glyphs printed within or between the black stripes of the bar code. Several passages reference the high density of the data that may be encoded by the glyphs within the bar code footprint (see, e.g., col. 5, lines 37 – 65). Decoding of the messages contained in the bar code and by the glyphs is discussed mostly in the context of the resolution of the devices needed to read each of the codes prior to decoding them. It appears that the only reference to specific message data encoded in the glyphs is found at col. 8, lines 2 – 13 which refers to added tracking control data for inventory control of documents. It is respectfully submitted, therefore, that Paul does not teach the requisite limitation of claims 1 and 12 of the second marks on said medium conveying an overtly marked code; said overtly marked code, when decoded, producing data for use in decoding said covertly marked code.

Claim 31 requires placing second marks on said medium adapted to convey an overtly marked code; said overtly marked code, when decoded, producing an encrypted message and decryption data used by a secure server to decrypt the encrypted message; the decrypted message causing the secure server to produce decoding data indicating which ones of said first marks are included in the subset of said first marks that convey said covertly marked code.

The Paul reference makes no mention of the bar code (the second marks), when decoded, producing an encrypted message or decryption data that is used by a secure server to decrypt the encrypted message. It is respectfully submitted, therefore, that Paul does not teach the requisite limitations of claim 31.

For the foregoing reasons, is believed that independent claims 1, 12 and 31 are patentably distinct over and not anticipated by the Paul disclosure, and are believed to be in condition for allowance. Insofar as claims 2 – 3, 6 – 10, 13 - 15 and 18 – 30 are concerned, these claims all include the limitations of and depend from now presumably allowable claims 1 and 12, and therefore are also in condition for allowance.

Dependent Claims Contain Allowable Subject Matter

It is respectfully submitted that the Office Action fails to show that the Paul reference teaches the limitations required by dependent claims 3 and 15, 8 and 19, 25 and 18, 26 and 29, 27 and 30. It is respectfully submitted that the Office Action has failed to provide a *prima facie* case of anticipation for any of these dependent claims and that each of these claims contain allowable subject matter.

<u>Claims 3 and 15</u>

Dependent claims 3 and 15 are directed to a record and method respectively wherein said covert code characteristic is a chemical taggant. The Office Action states that Paul teaches that the covert code characteristic is a chemical taggant "wherein the chemical taggant is drawn to the different colors used for the glyphs."

During patent examination, the pending claims must be given their broadest reasonable interpretation consistent with the specification. MPEP §2111 (citation omitted). Applicants are aware that broad interpretation by the examiner reduces the possibility that the claim, once issued, will be interpreted more broadly than is justified. However, the broadest reasonable interpretation of the claims must also be consistent with the interpretation that those skilled in the art would reach. The

words of the claim must be given their plain meaning unless applicant has provided a clear definition in the specification, and are given their ordinary meaning in the usage of the field of the invention, unless the text of the patent makes clear that a word was used with a special meaning. MPEP §2111.01 (citations omitted).

With reference to claims 3 and 15, the specification provides guidance as to the meaning of the term 'taggant":

> One embodiment of covert code characteristic utilizes chemical distinction that requires a separate chemical test on each glyph, i.e., the use of taggants. One possible method of incorporating taggants is to make an atomic substitution of one or more of the components of a toner. An example may be to replace the hydrogen atom on a charge control agent "cetyl pyridinium chloride." Substitution of the chlorine with bromide or iodine will cause a charge control agent change, which will most likely perform similar for all practical or visual purposes but in fact will be chemically different and can be so detected. A second desired characteristic for the authentication process will be met in that the print area containing this type of substituted material will be extremely small and difficult to locate or quantify except with highly specialized equipment. Electron dispersive x-ray analysis is capable of analyzing areas down to approximately one square micron for elementary compositions as low as 0.5%. The sensitivity of the technique is enhanced if the material is not homogeneously spread throughout the sample, but is located in clumps as is the case with some charge control agents that are surface active agents.

Specification, at page 10. In addition, taggants used in marking materials are known. See, for example, US Patent 5,225,900 issued to Wright in 1993:

> According to the present invention, taggant materials are provided in the basic marking material (toner, ink or marking film) for subsequent identification by the printing system. A "taggant" is defined herein as an additive to the marking material which can be combined with a marking material composition, and is selectively detectable independently from the primary colorant (e.g., pigment or dye) of the marking material. Preferred taggants will respond to an external stimulus

in a way that can be specifically recognized by a reproduction
system.

US Patent 5,225,900, col. 5, lines 33 – 43.

It is respectfully submitted that, while the terms in the claims may be given
their broadest possible interpretation during examination, interpreting the term
"taggant" in claims 3 and 15 as the different colors used for the glyphs is not
consistent with Applicants' specification, with Applicants' claim 1 (where the covert
code characteristic is defined) nor with the technology of marking materials as
demonstrated in the Wright '900 patent.

For the foregoing reasons, is believed that a prima facie case of
anticipation has not been made against dependent claims 3 and 15, since these
claims include a limitation that is not taught in the Paul disclosure. Applicant
respectfully requests that the rejection as to these claims be withdrawn, and that
the next communication at least indicate that claims 3 and 15 contain allowable
subject matter.

Claims 8 and 19

Dependent claims 8 and 19 are directed to a record and method
respectively wherein said first marks are comprised of a first and a second set of
marks, and only said second set of marks convey said covertly marked code. The
Office Action states that Paul teaches that this limitation at column 6, lines 35 –
40. The passage recited there discusses the use of color for more precise
spectral signature distinction that can be used in glyphs of a glyph code providing
either a bistate or polystate characteristics.

It is respectfully submitted that the recited passage does not teach the
required limitation. First, since color is visually detectable, color alone cannot be a
covert code characteristic as required in claim 1 and so the glyphs referred to in
Paul must not be part of the "first marks." Even if the glyphs were considered to
be "first marks", there is no teaching in this passage that the glyphs are comprised
of a first and a second set of marks, and only said second set of marks convey

said covertly marked code. The recited passage seems to disclose that glyph states (i.e., 0's and 1's) may be represented by different color glyphs. But this passage treats all of the glyphs collectively as being part of the coded message ("Multicolor printing can be used to provide increased data density." Paul at col. 6, lines 31 – 32.)

Claims 25 and 28, 26 and 29 and 27 and 30

Dependent claims 25 and 28 are directed to a record and method respectively wherein the data produced for use in decoding said covertly marked code includes a location of the first marks on the encoded record. Dependent claims 26 and 29 are directed to a record and method respectively wherein the data produced for use in decoding said covertly marked code includes information about how the covertly marked code was encoded on the record. Dependent claims 27 and 30 are directed to a record and method respectively wherein said covertly marked code, when decoded, produces an encrypted message.

It has already been noted above that the Paul reference provides little or no teaching as to the content or type of message encoded by the bar code and glyphs. It is respectively submitted that the Paul reference teaches none of the limitations of these dependent claims.

For the foregoing reasons, is believed that a *prima facie* case of anticipation has not been made against dependent claims 3 and 15, 8 and 19, 25 and 28, 26 and 29, 27 and 30, since each of these claims includes a limitation that is not taught in the Paul disclosure. Applicant respectfully requests that the rejection as to these claims be withdrawn, and that the next communication at least indicate that claims 3 and 15, 8 and 19, 25 and 18, 26 and 29, 27 and 30 contain allowable subject matter.
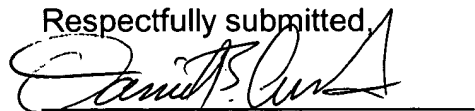
Reconsideration Requested

The undersigned respectfully submits that, in view of the foregoing amendments and remarks, the rejections of the claims raised in the Office Action dated December 31, 2003 have been fully addressed and overcome, and the present application is believed to be in condition for allowance. It is respectfully requested that this application be reconsidered, that these claims be allowed, and that this case be passed to issue.

No additional fee is believed to be required for this amendment. However, the undersigned Xerox Corporation attorney hereby authorizes the charging of any necessary fees, other than the issue fee, to Xerox Corporation Deposit Account No. 24-0025. This also constitutes a request for any needed extension of time and authorization to charge all fees therefor to Xerox Corporation Deposit Account No. 24-0025.

In the event the Examiner considers personal contact advantageous to the disposition of this case, he is hereby authorized to call Applicant's attorney, Daniel Curtis, at Telephone Number (650) 812-4259, Palo Alto, California.

Respectfully submitted,

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Date: 3/25/2004

Attachment: Exhibit I: Document (in PDF format) available from Xerox Corporation web site entitled "DataGlyphs - Working Document Lifecycle™ Detail"